Adoption and intention of the usage of shared mobility through Technology Acceptance Models: Systemic analysis of literature through PROKNOW-C

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Abstract

The quick development and popularization of comunication techlonogies has made the modalities associated with shared mobility leverage through internet platforms operating e-hailing services in cities around the whole world. The long-term development of a shared mobility service depends on the continued use of its users. In order to revise the availeable literature about this subjet, the PROKNOW-C was utilized, performing the bibliometric and systemic analysis of the literature. The results lead to the making of a portifolium of 21 articles, highlighting the more relevant authors, journals and keywords. The systemic analysis concluded that: the survey methodology is the most used in articles; while the main constructs that are directly and indirectly linked to the intention to use the service stand out. The results confirm that the theoretical models of technology acceptance are tools that allow the understanding of determinant factors reguarding the intention of usage and continuity of shared mobility. The research made possible to highlight that these models can explain the user's intents, ranking which constructs have greater influence, thus representing an important contribuition to the extension of technology intent models.

Keywords
Technology acceptance models, Shared mobility, Shared economics PROKNOW-C, Revision.

1. Introduction

Although the concept of "sharing" isn't something new, the sharing of services, products and personal skills is seen as an essencial quality of sharing economics development, which popularity has rapidly grown over the past few years, being particularly successfull in digital platforms. These economic aspects have the potential to stimulate the distribution and usage of underutilized assets while also promoting more sustainable consumption, with economic, social and environmental consequences.

The shared economy is a consumption model described as “disruptive of innovation”, which challenges the traditional business concept, as well as what to consume and how to consume it (Botsman e Rogers, 2011). In most cases, in this kind of business, consumers have the option of sharing or renting resources such as cars and rooms amongst each other instead of doing so through traditional companies, such as taxi companies and hotels (Satama, 2014). The sharing economy promotes externalities with impacts on sustainability, which means that, when sharing initiatives are well managed, they promote extraction, production, consumption and disposal economies (Valente; Patrus, 2019).

Urban mobility is seen today as a great field of interest reguarding the incorporation of new technologies. With the continuous population growth in urban areas, cities have faced many problems in providing effective transport for the

population, generating bad trafic, accidents, pollution and inflated transportation costs.

In a broader understanding, shared mobility can be defined as a travel alternative that aims to maximize the use of transportation resources that members of society are already pragmatically paying, disconnecting its use from property. In other words, it is short-term access to shared vehicles according to the user's needs and convenience.
Shared mobility is one of the segments of the shared economy, with the greatest disruptive potential over urban transport systems. Therefore, the implementation of shared mobility offers the potential to increase efficiency, competitiveness, social equality and quality of life in cities.
One of the possibilities of shared practices is the connection of consumers and people with common interests. This connections, called "peer-to-peer", cut out the middleman and make possible the saving of physical and financial resources (Dubois; Schor; Carfagna, 2014). The technological factors provide the dissemination of social networks as well as the reduction of transaction costs peer-to-peer, while also making possible the direct contact between consumer and provider, reducing the spends on intermediation costs (Botsman; Rogers, 2011). Still, according to Botsman and Rogers (2011), shared ecconomy has four main principles that allow it's functionality.
The general idea of mobility as a sevice is to allow citizens to adquire, according to their particular needs and financial capabilities; an option among mobility packages that includes public (subway, train, bus) and individual (taxi, car, bicycle) transportation (Stefandsdotter et al., 2015). They are integrated into a single platform that allows the planning, booking, monitoring and payment of travel services, thus reducing intermodal setbacks, offering greater modal flexibility, resource efficiency and better use of infrastructure.
Among the types of mobility as a service, there are several, that grow as new mobility services on demand such as bikesharing and carsharing (that is, vehicle sharing in general), ridesharing (travel sharing), pop up transit (collective transport on demand), ridesourcing (travel supply). Shaheen e Chan (2016) offer a classification of shared mobility based on what is being shared. The ridesharing consists of sharing the trip, that is, the ride (or lift). This ride can take place either in a public service such as taxi (taxi pooling) or in a private vehicle (car pooling or car sharing). This share can only be classified as a lift if the users' routes coincide. Thus, car pooling can be defined as thesharing of a private vehicle by more than one passenger whose paths to reach destinations follow semi-common routes(Ferrari et al., 2003); while taxi pooling is defined by Yan, Chen and Wu (2012) as the sharing of a taxi among morethan one passanger which paths to reach a particular destination follow semi-commom routes.
When there is no compatibility of routes, that is, when the driver travels a path exclusively for the passenger's needs, the service should no longer be classified as a lift. In this case, the service is classified as ridesourcing, which means there is a service being provided on demand. There are also two other types of on-demand transportation service: Ridesplitting, which allows passengers on a similar route to share a ride and share the fare; and E-hail, which instead of being a third-party vehicle, are taxis from the same company. Ridesourcing is the largest segment of transport services on demand (Jin et al., 2018).
Ridesourcing, a business model based on mobile GPS technology, is one of those neoliberal projects that is changing the culture of urban mobility around the world. Ridesorucing companies generate urban entrepreneurship through job creation. In mobile taxi apps, mobile apps are used to provide an online network for people to share rides, connecting drivers and independent customers (Hall, Kendrick & Nosko, 2015). This way, passengers use the app to request a ride, so they can search for available cars around them and order their "lift". They connect drivers and users via GPS, so drivers can easily reach them, then the app sends the request to the nearest available driver who accepts or refuses the trip (Chan et al., 2016).
These alternative apps are gradually increasing their popularity, offering lower rates and a variety of payment methods (Pultan, 2016). Mobile apps are part of shared economy, a concept of business trends, which has recently emerged as an innovative business model in which people collaboratively use resources in innovative ways (Cohen & Keitzmann, 2014).
Right at the beginning of technology emerging in users' everyday lives, there was a growing need to understand why is technology accepted or rejected. The first theories that try to explain and predict these decisions were grounded in the field of Psychology. The TRA (Ajen; Fishbein, 1980) represented the origin of TAM, emerging along with the Theory of Planned Behavior (Ajzen, 1985). To develop a reliable model which could predict the actual use of any specific technology, Fred Davis adapted TRA and proposed TAM (Davis, 1989). He considered that the actual use of a system is essentially a behavior and, therefore, TRA would be the appropriate model for explaining and predicting that behavior. TAM suggested that the user's motivation can be explained by three factors: perceived ease of use, perceived utility and utility of use.
Despite the growing adoption of new technologies by travelers, and sharing practices as a whole, few studies have yet examined the factors that affect the adoption of shared mobility app. More recent studies focus on the business or governmental perspective, such as the impact of these apps on the tourism industry (Oskam & Boswijk, 2016), apps local regulations (Rauch & Schleicher, 2015), implications on global sustainability (Cohen & Kietzmann, 2014), but not from the consumers' perspective.

In this context, we can question why users decide to accept or, on the other hand, reject a certain technology. Recently, researches on technology acceptance in shared mobility contexts has become more popular. Although the potential of technologies to improve different kinds of services is intuitively convincing (Davis, 2011), the question of technology acceptance or rejection can be essential, thus requiring the identification and evaluation of studies publishedreguarding this field of study. TAM has evolved to become the fundamental model for understanding predictors of human behavior for the potential acceptance or rejection of technology. The strength of the model is confirmed by numerous studies emphasizing its wide applicability for a diverse set of technologies and users (Venkatesh, Morris, Davis, 2003).
Traditionally, the avaluation of transports sectors focus on the economic aspects, not always considering the ambiental and social spheres. Nonetheless, because of the possible extension and size of the impact caused by transport services activities on-demand by apps, this avaluation must be done considering social criteria.
The adoption is discussed as a difusion of the inovation paradigm (Rogers, 2003). This paradigm explains why and how inovative ideas, practices and techniques are accepted or rejected in a social system. Therefore, loads of models of technology acceptance have been developed incorporating individual factors (Davis, 1898; Venkatesh, Morris, Davis e Davis, 2003).
The majority of recent studies follow the integrated technology adoption paradigma (ITAP) proposed by Atkin, Hunt and Lin (2015) and Lin (20013) and the Technology Acceptance Model, proposed by Davis (1989). These models incorporate factors such as perceived utility, perceived ease of use, social influence, technology, adoption, among others.
Although several researchers have researched the pre-adoption behavior and the continuity of shared mobility services, studies and results on the main factors that interfere with the service are still lacking. Without a clear understanding of users' adoption behavior as well as their behavior over time, decision makers and service providers will not be able to improve the use of shared mobility apps.
This study seeks through a literature review to understand and identify which are the main and most used models of the theory, are used to understand the users of this technology of shared mobility. Thus, the article is divided into sections, such as the review methods, results of each analysis and conclusions.

2. Methods

In order to provide a structured bibliographic survey, capable of covering relevant studies that address this theme, the PROKNOW-C, Knowledge Development Process-Constructivist, was used as a method of reviewing the currently availeable literature. The method proposes that the researcher can form a bibliographic portfolio, from his area of interest, observing the intrinsic delimitations and restrictions (Lacerda, Enssiltn and Enssiltn, 2012), in addition to the articles that make up this portfolio that can be endowed with scientific recognition and alignment reguarding the research topic. It's a widespread method in the scientific community, and consists of three main stages: selection of the articles portfolio, bibliometric analysis; and systemic analysis (Viegas et al., 2016).
The theoretical literature identified was not reporting the literature systematics that aim to investigate the Technology Acceptance Models in the context of shared mobility services in general. However, these studies were quite focused on specific themes and mainly with the objective of enlightening which factors and constructs of these Models can predict the adoption of technology by users (Mariano et al., 2019).
In the first stage, a search for articles was carried out in the SCOPUS database, relevant to the topic of interest, where there was a selection of articles aligned with the research topic. The next stage, composed of bibliometrics, sought to identify the relevance of the articles in the portfolio, considering the number of citations, the journals and authors that publish studies related to the theme, and the keywords most used in these works. In the third stage, it consisted of a systemic analysis, through which an analysis was made of the content of the articles in the portfolio, using lenses that assist in the construction of the literature review. These lenses are able to demonstrate the gaps in the literature, and the tools adopted to meet the necessities of researchers (Enssltn et al., 2010).
The goal is to indentify, evaluate and analyse ther academic literature presented in the Technology Acceptance Models reguarding shared mobility context, considering:

- Providing a critical view of the present state of research efforts;
- Present empirical evidence available so far on the predictive validity of Technology Acceptance Models in the context of shared mobility
- Define perspectives to future researches

2.1 Portfolio Selection

The research theme, models of technology acceptance of shared mobility, was operated from the perspective of Production Engineering. SCOPUS has a vast database with several publications from different areas of science and

uses the SCImago Journal Rank (SJR) (Guerrero and Moya, 2012), to obtain the evaluation factor of a given journal. In order to perform the database research, two researching axes were defined: (1) Technology Acceptance; (2) Shared Mobility. Following that, keywords were defined for each axis of the research, as shown in Table 1, these keywords generated combinations for the searches.

Table 1 – Material Search

Keywords	**("Techonology Acceptance" OR "Techonology Adoption" OR "Innovation") AND ("Sharing Economy" OR "Ride-sharing" OR "Uber" OR "Taxi")**
Period	From 2010 to December 2020
Scopus base	621
Total publications	325
Duplicates	72
Number of occurrences, without duplication	253

The searches were performed between september 2019 and december 2019. The proccess resulted in 621 publication. Afterwards, two random articles were chosen to measure the adherence of the results, verifying if these two articles included the keywords initially proposed. The adherence was considered fit, with no need to add new keywords, going then straight to the next step with PROKNOW-C.

Out of the 621 found, 325 were availeable to the author. The bibliographycal manager EndNote was then utilized to manage the publication, through the export of the articles. It was then possible to recognize the existance of duplicated articles. 72 articles were excluded from the research, leaving 253 left. Then, the reading of these 253 articles' titles began, to verify if they were or weren't aligned with the theme of the research. After that, 151 more publications were considered unaligned with the theme, resulting in a database of 102 articles with titles that fit the research.

The PROKNOW-C method aims to, above all, make possible to the researcher to come up with a portifolio containing scientific acknowledment and relevance on the theme of interest. To measure the scientific acknowledgment, the method proposes the use of Google Scholar (http://scholar.google.com.br/), researching thearticles' titles and virfying the amount of citations on the referred website. The data collected at this stage refer to october 2019.

Once made the researches on Google Scholar it was seen that the most cited article received 168 citations. It was stablished a 10-citations cut-line, which represents 97,82% of the citations, equivalente to 58 articles. Other articles received 4 citations or less, of which 19 articles had no citation at all.

Following the method, it is recommended the reading of the 102 articles' abstracts, in order to classify them as aligned or not with the main theme. At this stage of the research there were 24 articles left (repository A). Among these, 60 authors were identified in the references database.

To elaborate the repository B it was taken in consideration articles with 6 or less citations (total of 58). These articles were classified as following: 34 articles with two or less years passed since they were published (the more recent ones); and 24 articles with more than two years passed since they were published.

Out of the 34 most recent articles, abstracts were read. Articles with less than two years of publication do not have the potential to be cited on a large scale, due to the time between the completion of the research and subsequent acceptance for publication. Therefore, for an article with less than 2 years of publication to be cited by another unpublished article, it may take a longer time. Considering this criterion, 19 recent articles were included in repository B.

Adding repositories A and B we obtained a total of 43 articles, called repository C.

The 43 articles were obtained in full. After reading these publications in full, 24 articles did not meet the specificities of the research, while 21 publications were considered for the formation of the bibliographic portfolio, as shown in Table 2.

Table 2 – Studies related to evaluating shared mobility

Title	**Author**

A discrete choice framework for modeling and forecasting the adoption and diffusion of new transportation services.	Feras El Zarwi, Akshay Vij, Joan L. Walker (2017)
Adoption of ride-sharing apps by Chinese taxi drivers and its implication for the equality and wellbeing in the sharing economy.	Xinchuan Liu, Weiai Wayne Xu (2019)
Analysing uber in social media — disruptive technology or institutional disruption?.	Christofer Laurell e Christian Sandstrom (2016)
An empirical study of consumers' intention to use ride -sharing services: using an extended technology acceptance model.	Yu Wang, Shanyong Wang, Jing Wang, Jiuchang Wei, Chenglin Wang (2018)
Can mobile taxi redefine the transportation industry? A systematic literature review from the consumer perspective.	Keng-Boon Ooi, Fang-Ee Foo, Garry Wei-Han Tan (2018)
Consumer adoption of the Uber mobile application: Insights from diffusion of innovation theory and technology acceptance model.	Somang Min, Kevin Kam Fung So, Miyoung Jeong (2019)
Co-utile P2P ridesharing via decentralization and reputation management.	David Sánchez, Sergio Martínez, Josep Domingo-Ferrer (2016)
Does satisfaction of P2P online transportation affect consumer willingness to purchase their own vehicles?.	Adhi Setyo Santoso, Ihsan Hadiansah, Efraim Christoni (2018)
Dynamic ridesharing and information and communications technology: past, present and future prospects.	Zarar Siddiqi e Ron Buliung (2013)
Empirical Examination of Users' Adoption of the Sharing	Yupeng Liu e Yutao Yang (2018)

Economy in China Using an Expanded Technology Acceptance Model.	
Is Uber a substitute or complement for public transit?.	Jonathan D. Hall, Craig Palsson, Joseph Price (2018)
New ways of mobility: the birth of ridesharing. A case study from Hungary.	Dóra Balint e András Trocsanyi (2016)
Real time ridesharing: understanding user behavior and policies impact.	S.Carrese, T.Giacchetti, S.M.Patella, M.Petrelli (2017)
Real-Time Ridesharing Opportunities and Challenges in Using Mobile Phone Technology to Improve Rideshare Services.	Andrew Amey, John Attanucci, Rabi Mishalani (2011)
Self-organized ridesharing: Multiperspective annotated review.	Sharon Shoshany Tavory, Tamar Trop, Yoram Shiftan (2019)
Sharing for people, planet or profit? Analysing motivations for intended sharing economy participation.	Lars Böckera e Toon Meelen (2017)
The Consumer Acceptance of Smart Product-Service Systems in Sharing Economy: The Effects of Perceived Interactivity and Particularity.	Dong Lu, Ivan KaWai Lai, Yide Liu (2019)
The perception of value of platform-based business models in the sharing economy: determining the drivers of user loyalty.	Thomas Clauss, Peter Harengel, Marianne Hock (2019)
Understanding consumers' willingness to use ride-sharing services: The roles of perceived value and perceived risk.	Yu Wang, Jibao Gu, Shanyong Wang, Jing Wang (2019)
Mobile taxi booking application service's continuance usage intention by users.	Gooi Sai Wenga, Suhaiza Zailania, Mohammad Iranmaneshb, Sunghyup Sean Hyunc (2017)
Factors Influencing Passengers' Attitude and Adoption Intention of Mobile Taxi Booking Application	William Eng Young Keong (2016)

3. Results and Discussion

3.1 Bibliometric analysis

In PROKNOW-C, the first bibliometric evaluation to be made takes into account the journals in the bibliographic portfolio and its references. The research revealed that the most prominent journal was Transportation Research Part C, with 3 articles in the portfolio and another 2 articles in the references.
Based on research carried out through Google Scholar website, it was possible to verify the scientific recognition of the articles. Of the 21 articles in the portfolio, 3 were more prominent: “Sharing for people, planet or profit? Analyzing motivations for intended sharing economy participation ”, with 168 quotations; “Promises and paradoxes of the sharing economy: An organizing framework”, with 139 quotations; and “Commercial orientation in grassroots social innovation: Insights from the sharing economy”, with 128 quotations.
The most prominent authors in the portfolio were Christian Sandstrom and Susan A. Shaheen, both of them with 2 articles. The articles do not have many authors in common, this can be explained by the theme being recent and sort of an investigation itself. Among the references, the most prominent authors are Shaheen and Cohen, with 6 articles, J. Hamari also with 6 articles, Davis with 7 articles, Rogers with 5 articles and Venkatesh with 8 articles.
Considering the analysis of the keywords included in the portfolio, we have the presence of the following words: “sharing economy” in 8 articles; Ridesharing in 7 arcticles and “Technological innovation” in 4 articles.

3.2 Systemic analysis

Stage three of PROKNOW-C sought to evaluate the content of articles in the bibliographic portfolio through methodological lenses. Those lenses aim to delimit and guide the researcher on how to carry out his research, seeking to shape, for example, the types of questions one may ask or the way data is collected (49). The lenses, therefore, standardize the researcher's search, with the objective of observing the same aspects throughout the whole portfolio and, in this way, making a relevant comparative study.
The theme of this study was developed in the absence of a bibliographic review method with the same theme so, for Proknow-c, the methodological lenses applied were adapted from the research on Shared Mobility.
As the first applied lens, we sought to discover the methodology applied in the articles, as well as the approach and the temporal delimitation adopted by the authors. As for the methodology, there was 1 qualitative study, 14 quantitative studies, 4 conceptual studies and 2 mixed studies (qualitative and quantitative).
The Survey methodology may have been highlighted in most studies due to the fact that the theoretical models of user evaluation are self-administered questionnaire instruments. These types of instruments allow for large scale data collection, therefore, permitting the analysis of a significant sample of the common problem among survey type studies.
As the temporal approach of the studies indicated a greater presence of cross-sectional to longitudinal studies, it is noted that longitudinal studies require greater effort from the researchers as the production of results implies the analysis of data in a series of several years, however, their scientific recognition tends to be bigger. On the other hand, cross-sectional studies contribute to a more immediate diagnosis of the situation, even considering the present study, its greater use is justified by the fact that it is still a recent topic.
The second lens of this systemic analysis, verifies the way data was collected, as well as the country or region of greater coverage.
Data collection was similar in most articles (15 articles), through the application of the survey methodology, that is, through the application of questionnaires, the main characteristic of the survey methodology.
The third applied lens is aimed at identifying whether the concepts of shared mobility for users converge with theoretical affiliation and which tools or theoretical models of technology acceptance were used.
In the articles, shared mobility has a unanimous concept of the term “shared ride”, used by international literature, in reference to all types of transport where the trip is shared by the owner with other passengers (Teal, 1987).
Of the 22 articles in the portfolio, 7 had TAM or part of it as a tool. This result demonstrates the effectiveness of ProKnow-C in meeting the specificity of the research, especially when it comes to the search for literature focused on the research area.
Each of the articles have its own objectives. The study by Xu and Liu used ITAP to explain how the adoption of these sharing applications is linked to several innate and structurally inherited factors from users. The studies Weng et al., Wang etc al., Tan et al. and Keong used the Technology Acceptance Model (TAM) adding factors external to the model to understand the intention and continuity of usage by consumers. The article Jeong et al. used DIT (Diffusion of Innovation Theory and Technology) together with TAM, as they are useful in understanding specific characteristics that affect the acceptance of a new innovation.

This lens presents the various theoretical models that can be used to understand users' perceptions, as well as TAM being one of the most used.
Another factor evaluated in the portfolio was related to sociodemographic data. These indicators are essential to the association of the results of the intention and continuity of the modalities of shared mobility, with aspects of the user's social life characterizing groups and instructing the analyzes.
Most articles demonstrate that the sociodemographic indicators are restricted to information such as age, gender, salary range and educational level, which happens in 9 cases.
The last lens applied refers to the results presented in the portfolio articles. From these results, it is possible to distinguish the need of using other tools to verify the intention and continuity of shared mobility services.
When investigating the variables of TAM, perceived utility and perceived ease of use, the results of the literature proved to be quite similar, showing both variables to be critical determinants of consumers' intention on using shared mobility services. In addition to the most notable benefits of ride sharing, such as cost reduction, studies cite some measures that can be taken to increase perceived utility, in order to increase the perception of users and the opportunity for them to become familiar with sharing rides through platforms.
It was recognized that perceived utility, perceived ease of use and social influence directly affect the users' intention on using the service, as well as the perceived risk and the intention of using it indirectly.
We must consider that the social and educational factors of the user can positively or negatively influence the intention and continuity of using a technology. One of the variables used as an external factor in studies, such as age and education, point out that the higher the age, the less aptitude for the usage and familiarity with technologies, as shown in 9 studies.
This comes from the realization to what researchers have outlined regarding the use of shared mobility technology, as in the study by Fo and Ooi (2018), where they point out that respondents from different age groups react differently from the average population. In addition to age groups being less or more prone to the use of technology, consumers with less education would have more difficulty in adopting any kind of IT, demonstrating a flaw in it. Therefore, the research must moderate the model with different variables, in order to investigate the strength of these relationships.
A factor that almost all articles take into account is social influence, which negatively influences the adoption of shared mobility applications by users, demonstrating that socioeconomic and digital inequalities are interconnected, this inequality to the adoption of technology being a possible result of demographic and willingness differences, as well as social influence, even as the studies that took price as an external factor demonstrated it as a great attraction for users to choose between shared mobility services.
Demographic factors, age group and gender, demonstrated that younger respondents are quicker to accept new technologies and have greater inherent risks of use. The gender factor, on the other hand, only found a greater risk perceived by the female gender as the empirical evidence demonstrates that men are actually more likely to be affected by organizations and other users when they hesitate to use shared mobility services.
Perceived risk, another factor studied in most of the researched literature, demonstrates that attitudes are needed in order to reduce the risk created by the users. Firstly, this risk will be reduced when consumers have more experience with the technology (Cheng and Huang, 2013). It was also noted that the platforms offering these services must improve their security mechanisms aiming to keep the user's privacy, as well as financial and personal security.
The study also found that users value time efficiency and accessibility more in their service options, as they offer shorter travel and waiting time compared to traditional means of transport, such as buses, conventional taxis and subways.
Although the studies encompass different regions of the world and it has been demonstrated in several of them that cultural issues provide polarization to the research, the results of this review do not consider them, since the cultural contexts are very similar in various studies, which encourages future researchers to consider comparison between countries with different policies and cities of different sizes.
Another important aspect observed in the results found throughout the literature is that, despite the BASE constructs of these theoretical models together with extended constructs, such as psychological and some demographic ones, there are other constructs and theories that were not addressed, such as, for example, perceived joy, capacity for personal innovation, readiness for technology and government regulation among other ones which can contribute to the variation explained in the models.

4. Conclusion

The present research dealt with a systematic review of the literature regarding the topic of the acceptance of different means of shared mobility. It analyzed the content of an article portfolio in a systematic way through the application of conceptual lenses, highlighting strengths and weaknesses in each one of them. This process showed the efficiency of PROKNOW-C for literature reviews, demonstrating strictness in obtaining the results and even great depth to the analyzes.

When considering the final selection of a total of primary studies that underlie research on technology acceptance in the context of shared mobility, a couple of issues have to be emphasized. The first concerns the history of publications, as already mentioned. As it is a very current subject, the frequency of publication in literature is given a clear trend from 2016 that can be followed until 2019, with a higher jump around the year 2018. A limitation to the study was the use of only one database although, in future studies, more specific databases may be used.

As one of the main results, it should be noted that TAM is a widely used tool in the field of technology acceptance and also technology in general, it has proved to be efficient in measuring acceptance. This acceptance, in turn, is an important indicator of the dissemination and diagnosis of this technology, especially in different social contexts.

In addition, most surveys use TAM as a framework, that is, as a central model when proposing their own research models. Several use the original TAM, but with the addition of one or more new external variables, thus trying to increase the predictive validity of the original model. Others use TAM combined with other acceptance theories.

The associations between the acceptance of technology and sociodemographic data represent an important part of the studies, as they are factors in the social life of the individual that can influence the usage or non-usage of a new technology.

Another notable fact during the review refers to the sample groups of participants in the selected studies. In a large majority of the research, university students and younger people were the most commonly chosen sample group, a fact that can be considered as a research failure.

The second issue is related to the prevalence of authors from all over the world interested in research on technology acceptance in the field of shared mobility through mobile applications, addressing a variety of application domains, technologies and types of users who are using or learning to use them. The research clearly concludes the different cultures with a common goal of studying the acceptance of technology in users' mobile ride applications, as well as understanding their behavior and intention on using any type of new technologies related to transportation.

Most research on technology acceptance in the context of shared mobility comes from Asia, where in countries like Taiwan and China, these technologies are increasingly popular. North America, Europe and Africa are pursuing the same objective and similar research perspectives.

Shared mobility applications were used in studies with a variety of research methods in order to understand the antecedents and consequences of the use of technology. Different types of data analysis together with the Structural Equations Modeling (SEM) were the most frequently implemented type.

In other words, it is always interesting to see how the world is changing and how cities are concerned with issues such as urban mobility and technological advances.

The proposed structure and revision suggest many paths that require future research, such as the improvement of various components and their integration to form a more efficient ride sharing system, as well as the integration of said system with other urban and mobility services in an overall shared economy in order to provide a smart city context. Shared mobility systems are still growing and evolving, we hope that more interesting research will emerge to improve and reshape shared transport and the entire transport and urban system for the benefit of everyone.

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